



Upgrading Your CSS Software

Cisco Systems periodically releases new software versions for the CSS. To help you upgrade your CSS with a new software release, this appendix provides the following information:

- [Before You Begin](#)
- [Upgrading Your CSS](#)
- [Updating Management Information Base Files \(MIBs\)](#)



Note

When Cisco Systems makes syntax changes to existing CLI commands, the CSS updates your startup-config automatically with most command syntax changes. For example, the CSS automatically updates the **web-mgmt state enabled** command in the startup config to the new **no restrict web-mgmt** command. If the CSS does not update a command syntax change in a startup-config automatically, a startup error is displayed. Refer to the *Release Note for the Cisco Series Content Services Switch* for information on which command syntax changes display startup-config errors.

Before You Begin

Before you can upgrade your CSS, copy the new CSS software to your FTP server and configure an FTP server record for the FTP server on your CSS. To display the maximum number of installed versions allowed on your hard disk or flash disk, use the **show installed-software version-limit** command.

Copying the New CSS Software

ArrowPoint Distribution Images (ADIs) of the CSS software versions are on the Cisco Systems Web site (www.cisco.com). Use your customer login and password to access this page. From this location, you can access the page listing the versions of GZIP-compressed software. Click an image to download it. Once the image is downloaded, place it on an FTP server that the CSS can access.



Note

You do not need to uncompress the GZIP-compressed software. When you copy it or the upgrade script copies it to the CSS, the CSS uncompresses it.

Configuring an FTP Server Record on the CSS

Before you can copy the ADI from the FTP server to the CSS, you must create an FTP record file on the CSS identifying it. The record contains the IP address, username, and password for the server. To configure an FTP server record:

1. Log into the CSS.
2. Access global configuration mode by entering:

```
# config
(config)#
```

3. Configure the default FTP server by using the **ftp-record** command. The syntax is:

```
ftp-record ftp_record ip_or_host username
["password"|encrypted-password encrypted_pwd] {base_directory}
```

The options and variables are:

- *ftp_record* - Name for this FTP record file. Enter an unquoted text string with no spaces and a maximum of 32 characters.
- *ip_or_host* - IP address or host name of the FTP server you want to access. Enter an IP address in dotted-decimal notation (for example, 192.168.11.1) or a mnemonic host name (for example, myhost.mydomain.com).
- *username* - Valid login username on the FTP server. Enter a case-sensitive unquoted text string with no spaces and a maximum of 32 characters.
- *password* - Password for the valid login username on the FTP server. Enter a case-sensitive, quoted text string with no spaces and a maximum of 16 characters.
- **encrypted-password** *encrypted_pwd* - Encrypted password for the valid login username on the FTP server. Enter a case-sensitive, unquoted text string with no spaces and a maximum of 16 characters.
- *base_directory* - Optional base directory when using this record.

For example:

```
(config)# ftp-record DEFAULT_FTP 192.168.2.01 eng1
encrypted-password serve
```

You can now upgrade your CSS.

Upgrading Your CSS

You can upgrade your CSS software by either:

- [Using the Upgrade Script](#)
- [Manually Upgrading the CSS](#)

Using the Upgrade Script

The upgrade script allows you to upgrade your CSS without having to enter any CLI commands. There are two ways to run the script:

- [Automatically Running the Upgrade Script](#)
- [Interactively Using the Upgrade Script](#)

**Note**

If the upgrade script fails while upgrading the CSS to the same version of software that is currently running, the CSS software directory will be incomplete. To reinstall the software, you must upgrade the CSS manually (that is, FTP the .adi file to the CSS and perform a manual unpack).

Automatically Running the Upgrade Script

You can run the upgrade script to perform the software upgrade without having to enter any information. The script automatically:

- Checks to see how many installed software versions are installed on the CSS. If there are two installed versions (the maximum), the script deletes an older version.

**Note**

The script will not offer to delete a version that you have configured as the primary or secondary boot file. On a flash disk-based system, you may need to quit and then deselect the primary or secondary boot file before continuing with the upgrade.

- Archives the running configuration to the startup configuration.
- Copies the new ADI to the CSS boot-image directory.
- Unpacks the new ADI.
- Sets the primary boot-file to the new ADI.
- Reboots the CSS.

To upgrade your CSS software using the upgrade script:

1. Log into the CSS.
2. Archive your custom scripts and user-profile files from the CSS scripts directory to the archive directory. The upgrade overwrites files in the script directory but does not overwrite files in the archive directory. After the upgrade, you will restore these files to the scripts directory.

To archive each file to the archive directory, use the **archive script** command. The syntax for this command is:

```
archive script script_filename {archive_filename}
```

The variables are as follows:

- *script_filename* - The filename of the script to archive. To see a list of scripts, enter:

```
# archive script ?
```
- *archive_filename* - (Optional) The name you want to assign to the archive file. Enter an unquoted text string with a maximum of 32 characters.

For example, to archive the admin-profile file from the scripts directory to the archive directory, enter:

```
# archive script admin-profile
```

To copy any changes to your current user profile to the script directory and then archive the profile to the archive directory, use the alias **save_profile** command. For example, enter:

```
# save_profile
```

3. Start the upgrade script and include the name of the ADI and its extension in quotes.
 - If you are using a GZIP-compressed ADI from the FTP server, include the **gz** file extension. For example:

```
# upgrade "sg0710002.adi.gz"
```
 - If you are using an uncompressed version of the ADI from the FTP server, include the **adi** file extension. For example:

```
# upgrade "sg0710002.adi"
```

If you did not configure a default FTP record before starting the upgrade script, the script prompts you to configure one. You can either:

- Allow the CSS to automatically configure a record to the server containing the ADI.
- At the prompts, manually configure the FTP record by entering the FTP server information where you copied the upgrade ADI.

When a default FTP record is configured, information similar to the following appears during the upgrade:

```
Current Version:sg0710002 (Build 2)

*** You must remove an installed version to upgrade. ***

Attempting to delete sg0710001

archive running-config startup-config

Attempting ftp of sg0710002.adi:
# copy ftp DEFAULT_FTP ${new_version_adi} boot-image
Copying (-) 57,241,012
Completed successfully.
#(config-boot)#
unpack ${new_version_adi}
Unpacking(/) 99%
(config-boot)#
setting primary boot-file sg0710002

rebooting
```

The CSS automatically performs a flash upgrade, if necessary, and then boots the new image.

4. After you upgrade the software in a CSS 11506 that contains a passive SCM, use the **passive sync** command in boot-config mode (or the **passive sync** macro command) immediately after upgrading your CSS software to synchronize the boot configurations on the redundant SCMs. Refer to Chapter 1, [Logging In and Getting Started](#), the “[Configuring a Boot Configuration Record for the Passive SCM](#)” section.
5. Use the **restore** command to restore the startup-config file, custom scripts, and user-profile files previously archived in the CSS archive directory. To see a list of files in the archive directory, enter:

```
# restore ?
```

- To restore the startup-config file, use the **restore filename startup-config** command. For example, to restore the startup-config file in the archive directory as the startup-config file on the CSS, enter:

```
# restore startup-config startup-config
```

- To restore each custom script and user profile file to the script directory, use the **restore filename script** command. For example, to restore the admin-profile filename to the CSS script directory, enter:

```
# restore admin-profile script
```

Interactively Using the Upgrade Script

The upgrade script allows you to enter information and make selections by responding to prompts as it runs. Before the script performs the upgrade, it prompts you to:

- Remove ADIs from the CSS if the script detects two installed versions on a hard disk-based system or on a flash disk-based system
- Enter the version of the new ADI
- Set the primary boot-file to the new ADI
- Reboot the CSS with the ADI you are installing after the upgrade is done
- Archive the running configuration to the startup configuration

To use the interactive version of the script:

1. Log into the CSS.
2. Archive your custom scripts and user-profile files from the CSS scripts directory to the archive directory. The upgrade overwrites files in the script directory but does not overwrite files in the archive directory. After the upgrade, you will restore these files to the scripts directory.

To archive each file to the archive directory, use the **archive script** command. The syntax for this command is:

```
archive script script_filename {archive_filename}
```

The variables are as follows:

- *script_filename* - The filename of the script to archive. To see a list of scripts, enter:

```
# archive script ?
```
- *archive_filename* - (Optional) The name you want to assign to the archive file. Enter an unquoted text string with a maximum of 32 characters.

For example, to archive the admin-profile file from the scripts directory to the archive directory, enter:

```
# archive script admin-profile
```

To copy any changes to your current user profile to the script directory and then archive the profile to the archive directory, use the alias **save_profile** command. For example, enter:

```
# save_profile
```

3. Start the upgrade script. For example:

```
# upgrade
```

If you did not configure a default FTP record before starting the upgrade script, the script prompts you to configure one. You can either:

- Allow the CSS to automatically configure a record to the server containing the ADI.
- At the prompts, manually configure the FTP record by entering the FTP server information where you copied the upgrade ADI.

When a default FTP record is configured, the script displays the current version of the ADI.

```
Current Version: sg0710002 (Official)
```

If the script detects the maximum number of ADIs (two), a message informs you that you need to remove an ADI. Then the script prompts you to remove an older ADI. For example:

```
*** You must remove an installed version to upgrade.***
```

```
remove sg0710001[y n q]?
```




Note The script will not offer to delete a version that you have configured as the primary or secondary boot file. On a flash disk-based system, you may need to quit and then deselect the primary or secondary boot file before continuing with the upgrade.

4. If necessary, remove the ADI.
 - Enter **y** to remove the displayed ADI version.
 - Enter **n** for the script to display another version to remove.
 - Enter **q** to exit from the script.

```
remove sg0710001 [y n q]? y
```

```
Attempting to delete sg0710001
```

5. At the prompt, enter the file name and extension of the GZIP-compressed ADI version to install, and verify the information you entered. For example:

```
Please Enter Version to Install: sg0710002.adi.gz
```



Note If you are using an uncompressed version of the ADI from the FTP server, include the **adi** file extension (for example, sg0710002.adi).

```
Upgrade to Version sg0710002? [y n q] y
```

6. Determine whether to set the ADI as the primary boot-file.
 - Enter **y** to set the ADI as the primary boot-file and change the CSS configuration.
 - Enter **n** to keep the same primary boot-file configuration.

```
Set primary boot-file to Version sg0710002? [y n q] y
```

7. Determine whether to have the CSS reboot with the ADI you are installing.
 - Enter **y** to reboot the CSS with this ADI after the upgrade is done.
 - Enter **n** to not reboot the CSS with the ADI after the upgrade is done.

```
Reboot with Version sg0710002? [y n q] n
```

8. Determine whether to have the CSS archive the contents of the running-config file to the startup-config file.
 - Enter **y** to archive the contents of the running-config file to the startup-config file.
 - Enter **n** to keep the same startup configuration.

```
Archive running-config to startup-config? [y n q] y
```

```
archive running-config startup-config
```

The script copies the ADI from the FTP server, unpacks and installs it, and sets it as the primary boot-file.

```
Attempting ftp of sg0710002.adi.gz:
```

```
#      copy ftp DEFAULT_FTP ${new_version_adi} boot-image
```

```
Copying (-) 57,241,012
```

```
Completed successfully.
```

```
#
```

```
(config-boot)# unpack ${new_version_adi}
```

```
unpacking(/) 99%
```

```
(config-boot)#
```

```
setting primary boot-file sg0710002
```

9. If you decided to reboot the CSS with the installed ADI in Step 7, the CSS reboots automatically. If you made the ADI the primary boot-file and archived the contents of the running-config file to the startup-config file, the CSS automatically performs a flash upgrade, if necessary, and then boots the new image.

To manually reboot the system, enter the following commands:

```
(config)# boot
```

```
(config-boot)# reboot
```

10. After you upgrade the software in a CSS 11506 that contains a passive SCM, use the **passive sync** command in boot-config mode (or the **passive sync** macro command) immediately after upgrading your CSS software to synchronize the boot configurations on the redundant SCMs. Refer to Chapter 1, [Logging In and Getting Started](#), the “[Configuring a Boot Configuration Record for the Passive SCM](#)” section.

11. Use the **restore** command to restore the startup-config file, custom scripts, and user-profile files previously archived in the CSS archive directory. To see a list of files in the archive directory, enter:

```
# restore ?
```

- To restore the startup-config file, use the **restore filename startup-config** command. For example, to restore the startup-config file in the archive directory as the startup-config file on the CSS, enter:

```
# restore startup-config startup-config
```

- To restore each custom script and user profile file to the script directory, use the **restore filename script** command. For example, to restore the admin-profile filename to the CSS script directory, enter:

```
# restore admin-profile script
```

Manually Upgrading the CSS

You can manually enter CLI commands to upgrade the CSS.



Note

Make sure that you configure a default FTP server, as described in the “[Before You Begin](#)” section earlier in this appendix.

To manually upgrade the software version on your CSS:

1. Log onto the CSS.
2. If there are two installed versions (the maximum), remove an older version of the ADI from the CSS.



Caution

Do not remove the ADI currently running on the CSS. Use the **version** command to see the currently running software version.

To remove an ADI:

- a. List the ADIs on the CSS. For example:

```
(config)# show installed-software
sg0710001
sg0710002
```

- b. Access boot mode:

```
(config)# boot
(config-boot)#
```

- c. Use the **remove** command to remove the ADI. For example:

```
(config-boot)# remove sg0710001
```

3. Archive your running configuration to the startup configuration. For example:

```
# config
(config)# archive running-config startup-config
```

You can also use the **save_config** alias to archive your startup-config file. To view all available aliases, use the **show aliases** command.



Note If you created additional profiles on the CSS, archive them by using the **archive script** or **save_profile** command. After the upgrade is done, use the **restore filename script** command to restore the profile you archived.

4. Archive your custom scripts and user-profile files from the CSS scripts directory to the archive directory. The upgrade overwrites files in the script directory but does not overwrite files in the archive directory. After the upgrade, you will restore these files to the scripts directory.

To archive each file to the archive directory, use the **archive script** command. The syntax for this command is:

```
archive script script_filename {archive_filename}
```

The variables are as follows:

- *script_filename* - The filename of the script to archive. To see a list of scripts, enter:

```
# archive script ?
```
- *archive_filename* - (Optional) The name you want to assign to the archive file. Enter an unquoted text string with a maximum of 32 characters.

For example, to archive the admin-profile file from the scripts directory to the archive directory, enter:

```
# archive script admin-profile
```

To copy any changes to your current user profile to the script directory and then archive the profile to the archive directory, use the alias **save_profile** command. For example, enter:

```
# save_profile
```

5. Copy the new ADI to the CSS as the boot-image.

```
(config-boot)# <Ctl-z>  
# copy ftp DEFAULT_FTP sg0710002.adi.gz boot-image
```

DEFAULT_FTP is the FTP record file defined in [“Configuring an FTP Server Record on the CSS”](#) earlier in this appendix.

When you copy a GZIP-compressed ADI onto the CSS, the CSS automatically uncompresses it.



Note If you are copying an uncompressed version of the ADI from the FTP server, include the **adi** file extension (for example, sg0710002.adi).

6. Unpack the ADI. For example:

```
(config)# boot  
(config-boot)# unpack sg0710002.adi
```

7. Set the new ADI as the primary boot-file and install it. For example:

```
(config-boot)# primary boot-file sg0710002
```

8. Reboot the system. For example:

```
(config)# boot
(config-boot)# reboot
```

The CSS automatically performs a flash upgrade, if necessary, and then boots the new image.

9. After you upgrade the software in a CSS 11506 that contains a passive SCM, use the **passive sync** command in boot-config mode (or the **passive sync** macro command) immediately after upgrading your CSS software to synchronize the boot configurations on the redundant SCMs. Refer to Chapter 1, [Logging In and Getting Started](#), the “[Configuring a Boot Configuration Record for the Passive SCM](#)” section.
10. Use the **restore** command to restore the startup-config file, custom scripts, and user-profile files previously archived in the CSS archive directory. To see a list of files in the archive directory, enter:

```
# restore ?
```

- To restore the startup-config file, use the **restore filename startup-config** command. For example, to restore the startup-config file in the archive directory as the startup-config file on the CSS, enter:

```
# restore startup-config startup-config
```

- To restore each custom script and user profile file to the script directory, use the **restore filename script** command. For example, to restore the admin-profile filename to the CSS script directory, enter:

```
# restore admin-profile script
```

Updating Management Information Base Files (MIBs)

Cisco Systems recommends that you update the CSS MIBs after you upgrade the CSS software. CSS MIBs are included in the CSS GZIP file. During the software upgrade, the MIBs are loaded into the CSS /mibs directory.

To update the CSS MIBs on your management station after you upgrade the CSS:

1. FTP the MIBs from the CSS MIBs (/v1 or /v2) directory to your management station.
2. Load the MIBs into the management application.

■ Updating Management Information Base Files (MIBs)